DOUBLE FLEX SEAL FOR TUBULAR CONNECTION

Abstract

A threaded tubular connection has a box member including an internal thread, a pin member including an external thread engageable with the internal thread of the box member, and a protruding sealing surface disposed in the box member such that the pin member flexes radially inward upon passing the protruding sealing surface during make-up. The threaded tubular connection also has a recessed seal cavity disposed in the box member and a reverse angle shoulder at the pin nose that forces the pin member to flex radially outward into the recessed seal cavity of the box member upon final make-up.

A method of forming a double flex seal for a tubular connection includes engaging an internal thread of a pin member with an external thread of a box member and flexing a pin nose of the pin member radially inward by passing the pin nose over a protruding sealing surface of the box member during make-up. The method also includes flexing the pin nose radially outward when a reverse angle shoulder of the pin nose comes into contact with a reverse angle shoulder of the box member during make-up and completing the double flex seal by finally making up the connection such that the pin nose of the pin member seats in a recessed seal cavity disposed in the box member.

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